

The international diversification of banks and the value of their cross-border M&A advice

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Abstract

We examine the impact of the international diversification by banks on the value of their advice provided in cross-border merger and acquisition transactions by studying bidder returns and deal performance following 1,708 cross-border M&A deals. We find that bidders engaging a more internationally diversified financial advisor face lower stock price and synergy returns, worse deal operating performance, and slower deal completion. We show that these negative effects of diversification can be mitigated by involvement in financing or country-specific available capacity of the advisor.

Keywords: Bank Diversification, Cross-Border Mergers and Acquisitions, Advisor Choice.

JEL: G24, G34.

I. Introduction

Over the past few decades, the number and importance of especially cross-border mergers and acquisitions (M&A) have increased dramatically (Erel, Liao and Weisbach (2012)), due to the worldwide removal of entry restrictions in many industries and the growing significance of services in the economy (Hijzen, Görg and Manchin (2008)). Investment bankers fulfill a crucial role in advising firms that engage in cross-border M&A transactions.¹ However, deregulation (such as the European Second Banking Directive) also reshaped the financial sector and caused an enormous international expansion by financial institutions during the same period. In this paper we therefore examine 1,708 cross-border M&A transactions that were announced in a time period of sixteen years prior to the financial crisis and measure the impact of *international* diversification by banks on the value of their advice provided in *cross-border* M&A transactions.

We investigate two non-mutually exclusive hypotheses, the conflicts-of-interest hypothesis and superior-experience hypothesis. The *conflicts-of-interest hypothesis* argues that conflicts of interest between banks and their clients can cause inferior M&A advice. Short-term-oriented fee contracts with clients and a bonus system that rewards individual bankers based on revenues provide incentives to maximize the number and the size of the transactions,²

¹ The M&As recorded in the Securities Data Corporate (SDC) database reflect the growing importance of banks in providing M&A advice. In 1990, for example, banks advised M&As worth 47 percent of total deal value, while in 2005 this share had already grown to 75 percent. Among cross-border deals the banks' share grew from 51 percent in 1990 to 81 percent in 2005.

² These bonus schemes have been and still are hotly debated. E.g., 'Does your M&A add value?', *Financial Times* of February 5, 2009; 'Bankers' fee bonanza as M&A surges', *Financial Times* of February 8, 2006; 'Banks write big salary checks again', *Financial Times* of May 23, 2004. The hearings of the U.S. Financial Crisis Inquiry Commission also provides relevant details about the compensation policies of investment bankers (see, e.g., the testimony of Lloyd C. Blankfein of Goldman Sachs on January 13, 2010, in which he mentions a "near perfect correlation between changes in net revenues and compensation" (<http://www.fcic.gov/hearings/pdfs/2010-0113-Blankfein.pdf>, p. 6). See Kaplan and Rauh (2010) for a comparison between different sectors of the income distribution in the highest income brackets. Investment banks comprise a large proportion of the highest income brackets.

irrespective of the value creation through the deals (McLaughlin (1990); Rau (2000)).³ Long-term reputation concerns may inhibit such short-term behavior (McLaughlin (1990)). However, since a more internationally diversified position is likely to reduce reputation concerns, we expect that, for internationally diversified banks, the short-term benefits of inferior M&A advice are more likely to outweigh its long-term reputation costs. An implication of the conflicts-of-interest hypothesis is that a bank's international diversification is negatively associated with bidder gains.

A bank's international diversification could also be beneficial for the bidder. The *superior-experience hypothesis* argues that international diversification positively influences the value of M&A advice because of a bank's greater flexibility in the global allocation of its resources. The main factor employed by a bank in "producing" M&A advice consists of its investment bankers, whose experience plays an important role in the ultimate value of the advice that is offered. These bankers may for instance have the optimal experience to identify targets, certify the deal, or negotiate deal terms.⁴ Internationally diversified banks can be more flexible in assigning (cross-border) M&A deals to investment bankers with more target- or bidder-country specific experience (or advisory experience). If more experienced investment bankers advise the deals, we should find a positive relation between international diversification and bidder returns.

To empirically assess the two hypotheses, we use a comprehensive metric for international diversification, which is an entropy measure, as introduced by Jacquemin and Berry

³ Information asymmetry between banks and their clients can aggravate these conflicts of interest (see for example Bolton, Freixas and Shapiro (2007)). Mehran and Stulz (2007) review the possible conflicts of interest existing in financial institutions. Banks are better informed than their clients about the suitability of a cross-border M&A deal, while this information is difficult for the client to verify. Especially with cross-border M&A advice, the asymmetric information problem is likely to be greater for geographically diversified banks than for focused banks. This situation could create incentives for banks to pursue short-term strategies as described above.

⁴ Chemmanur, Ertugrul and Krishnan (2013), for example, show that individual bankers within investment banks explain a significant portion of M&A deal outcomes, suggesting that individual skills and experience play a significant role in M&A advice.

(1979), popularized by Palepu (1985), and extended to include international market diversification by Kim (1989). This measure determines the diversification of previously advised M&A deals, taking into account both the number of countries in which the bank was active and the distribution of shares among these countries. In our setting, a higher entropy value implies that advising banks are active in more countries and/or have smaller, more equal market shares in these countries.

Our results are most supportive of the conflicts-of-interest hypothesis. For the whole cross section of 1,708 cross-border deals, we find that international diversification negatively impacts bidder announcement returns and that this effect is most prevalent among acquisitions that require more effort and skills, i.e., acquisitions of foreign listed targets. The average negative effect for the listed-target deals is economically relevant, as an increase of one standard deviation in our entropy measure decreases the bidder's 3-day abnormal returns by 95 basis points (bps), reflecting 99 million \$ of the average bidder's market value. These results indicate that, on average, the advisor-client conflicts of interest weigh more heavily in the value of deal advice than the advisor's flexibility to assign the deal to the most experienced advisor.

Even though the negative relation between international diversification and bidder returns supports the conflicts-of-interest hypothesis, this negative relation could be mitigated under conditions in which conflicts of interests are likely to be less severe or under which superior experience of individual bankers could compensate for the agency conflicts. We test for those two conditions and find that the observed negative returns are mitigated for deals in which advisors are more concerned about the quality of the deal, such as when they are committed to financing ("skin in the game"), and for deals in which advisors have capacity slack to allocate

the deal to an investment banker with bidder-nation or target-nation specific experience (“available capacity to play”).

We also investigate the sources of the impact of advisors’ international diversification on deal value by focusing on synergy returns, bidders’ relative share of the synergy gains, and the change in operating performance of the combined entity. We find that, with the exception of the deals in which advisors are involved in financing, advisors’ international diversification negatively affects synergy returns and the operating performance of the combined entity, which is consistent with the conflicts-of-interest hypothesis. Advisors’ commitment to financing turns the relation between international diversification and synergy returns from negative to positive, indicating that their involvement in financing generates incentives to act in the interest of the bidders, hence provide superior advice. The source of their superior advice comes from allocating targets that generate greater synergies with the bidder and from their skills and experience to be able to negotiate a greater share of the synergy gains. Instead, internationally diversified advisors’ capacity to allocate the deal to individual investment bankers with target-nation or bidder-nation experience does not help bidders in generating greater synergies or receiving a greater share of the synergy gains.

We finally examine the impact of advisors’ international diversification on the likelihood to complete cross-border deals and the speed of completion. We find that, on average, international diversification of advisors does not influence the likelihood to complete cross-border deals, though they do tend to take more time to complete these deals. At the same time, having target-nation specific capacity increases the speed with which the deal is consummated and thereby neutralizes the longer time required for more internationally diversified advisors.

We perform several additional analyses to test the robustness of our results. A crucial robustness check concerns the potential endogeneity of advisor choice. We document that the negative effect of international diversification on bidder returns only remains robust for deals involving listed targets when accounting for the (endogenous) case in which the possible valuation effects influence the current bidders' advisor choice. We also show that our effects persist when controlling for past bidders' choices of advisor, the geographical span and location of the deal, and for the advisor's organizational type, global market share (and related size measures, as in Rau (2000); Hunter and Jagtiani (2003)), or focus on (and ensuing specialization in) the target- and bidder-country.

In sum, our study documents the relevance of the advising bank's international footprint for the value of the deal it advises. Our study brings together two important strands of the literature. First, our paper fits within the literature on geographic diversification in the banking industry, where some studies show a positive relation between geographic diversification and bank value (e.g., Eisenbeis, Harris and Lakonishok (1984); Deng and Elyasiani (2008)), while other studies show a negative relation (e.g., DeLong (2001); Amihud, DeLong and Saunders (2002)). We specifically examine the value of their M&A advice, as a potential source for their lower bank value. The current financial crisis illuminates the importance of the strategy and operations of large banks for the global economy. Their off-balance sheet activities and the conflicts of interest embedded there have raised particular concerns. Our results justify the increased attention for banks' roles in advising M&As.⁵

⁵ See, e.g., 'Wall Street's biggest con is M&A "advice"', *Wall Street Journal* of September 17, 2009 and the Baker vs. Goldman Sachs & Co case about the advice on the acquisition of Lernout & Hauspie by Dragon Inc. in 2000 (September 15, 2009).

Our paper also relates to the existing literature on the role of financial advisors in M&A deals. Servaes and Zenner (1996) identify three functions that investment banks fulfill.⁶ As advisors they reduce transaction costs, informational asymmetries between bidders and targets, and contracting costs. In addition, Allen, Jagtiani, Peristiani and Saunders (2004) highlight the certification role of advisors. According to McLaughlin (1990), a conflict of interest between advisors and clients could arise from the fee structure in their contracts. However, the advisors' concerns about their reputation could partially mitigate this conflict. Empirical research indicates that advisors' characteristics in general, and reputation in particular, influence bidder returns (e.g., Bowers and Miller (1990); Servaes and Zenner (1996); Rau (2000); Kale, Kini and Ryan (2003); Kisgen, Qian and Song (2009); Bao and Edmans (2011); Francis, Hasan and Sun (2012); Golubov, Petmezas and Travlos (2012)). We extend this literature by analyzing an overlooked source for the impact of advisors on bidder returns and deal outcomes, i.e., their international diversification.

The rest of the paper is organized as follows. Section II describes the data and defines advisor characteristics and deal outcomes. Section III assesses the impact of advisors' international diversification in their M&A advice on bidders' announcement returns. Section IV studies the sources of the internationally diversified advisors' value of advice by focusing on its impact on synergy returns, relative bidder gains, subsequent bidders' operating performance and deal completion. We conclude in Section V.

⁶ See also Rosenbaum and Pearl (2009) for a detailed description of the M&A process from the perspective of an investment banker, ranging from confidentiality agreements and valuations to site visits and the preparation of marketing materials.

II. Sample, Advisor Diversification and Deal Outcomes

We first describe the data and our sample of M&A transactions. We then define our various measures of advisor diversification in activities across countries and discuss deal outcomes of interest. Table A.1 in the Appendix contains the detailed definitions of all variables employed in this paper.

A. Data and Sample

From the *Securities Data Corporation* (SDC) database we collect all cross-border deals (1) in which listed bidders engage an advisor, (2) that can have operating performance information available between 1985 and 2010 and hence that are announced between 1990 and 2005, (3) that are larger than \$ 10 million, (4) in which the bidder sought at least 50 percent of the shares, and (5) sought 95 percent or more ownership after acquisition. A total of 2,979 deals satisfy these criteria.

In 388 deals the bidder or target is a financial firm (i.e., the primary SIC is between 6,000 and 6,999),⁷ and in 71 cases the designation of the bidder is unclear (as the relative size of the acquisition versus the bidder is larger than or equal to one). In 452 of the remaining 2,520 deals, bidders hire more than one advisor.⁸ We lose a further 360 observations because of data availability. We are left with 1,708 fully and reliably documented deals in which listed non-

⁷ The exclusion of financial firms is common when investigating the role of advisors in M&As (e.g., Allen, Jagtiani, Peristiani and Saunders (2004)). In many countries mergers between financial firms are subject to a different competition policy regime (Carletti and Vives (2009)) and/or are often actively sought or discouraged by various policymakers.

⁸ In unreported robustness tests we add 370 deals for which all data is available and in which firms engage multiple advisors back to the sample of deals in which firms engage only one advisor. Estimated valuation effects are mostly unaffected.

financial bidders choose one advisor, of which in 415 cases also the (non-financial) target is listed. We observe 344 different bidder-/target-country combinations in total.

[Tables 1, 2 and 3 around here]

Table 1 reports the 20 most important target and bidder countries, but we observe at least one acquisition in 39 other target countries and 23 other bidder countries in the sample. Most observations (20 percent) in our sample deals are between firms from the US and the UK.

Table 2 lists the key statistics of advisor characteristics and deal outcomes for the listed targets (in the upper panel) and for all targets (in the lower panel; variables are only tabulated when the number of observations differs from the listed-target sample). The other variables featured in our analyses, i.e., the characteristics of the deal, target, and bidder are listed in the Appendix Table A.2.

Table 3 tabulates – by way of preview – the bidder and synergy cumulative abnormal returns and bidder relative gains across international diversification terciles and the differences in returns between these terciles (notice that synergy and relative gains can only be calculated when targets are listed).

B. International Diversification, Global Top 5 and Country Focus

We now introduce our three measures of the geographical presence of advisors. First, our main variable is labeled *International diversification*. Assume there are A advisors ($a : 1, \dots, A$) operating in C countries ($c : 1, \dots, C$) and that the total value of the deals advisor z advises d_{zx} in country x during some time period ($d_{zx} \geq 0$). We first define advisor country share as the ratio

of the total value of deals that the bank advised in country c during the year prior to the cross-border acquisition announcement year and the total value of deals that the bank advised during the same period. We then define the international diversification of an advisor to equal the sum of advisor country share times the natural logarithm of one over advisor country share across all countries in which the advisor operates.⁹ Hence the *International diversification*, Div_z , of an advisor z with deals in some countries $(c:1,...,C_z)$ equals:

$$Div_z = \sum_{c=1}^{C_z} \left(\frac{d_{zc}}{\sum_{c=1}^{C_z} d_{zc}} \ln \left(\frac{d_{zc}}{\sum_{c=1}^{C_z} d_{zc}} \right)^{-1} \right). \quad (1)$$

This measure is similar to the entropy measure of diversification defined in Jaquemin and Berry (1979) and Palepu (1985).¹⁰ This entropy measure accounts comprehensively for both the number of countries as well as the share of deals in each country. For example, the diversification of an advisor equally present in two countries, i.e., with a 50/50 split, equals $\ln(2) = 0.69$, while a 90/10 split halves the measure to 0.32. Diversification of an advisor equally present in three countries almost doubles the measure to $\ln(3) = 1.09$.

For our calculations we downloaded all completed deals from SDC. Only completed deals are relevant when calculating the international diversification of the advisor, as from the bidders' perspective it is the set of completed deals rather than the withdrawn ones that matter most when

⁹ As in traditional top tier rankings we use one year of deals.

¹⁰ As is common in the economic and strategic management literature, we use a logarithmic function, entropy, as our measure of concentration and diversification. The entropy is decomposable so that it gives a natural way to measure concentration. The Herfindahl index, which is popular in measuring market concentration, is actually an approximation to the entropy (Booth and Booth (2009)). The measure was extended to include international market diversification by Kim (1989).

selecting a specific degree of diversification in an advisor.¹¹ As in Rau (2000), advisors receive full credit only for deals in which they provide services to the bidder and not to the target. Advisors also receive full credit for deals in which bidders engage multiple advisors. We further base our international diversification measure on the advisors' ultimate parents. To avoid misclassification, we account for all mergers and acquisitions among advising banks during our sample period.¹²

Advisor international diversification varies widely across deals (Table 2) and across target and bidder countries (Appendix Table A.3). The average score for all deals for the entropy measure is 1.21, while the 25th and 75th percentiles are 0.75 and 1.68, respectively. High average diversification in a "target country", Chile for example with 5 deals and an average diversification value of 1.58, suggests that bidders doing deals that involve Chilean targets are mostly advised by internationally diversified banks. Low diversification in a country, Israel for example with 17 deals and an average diversification of 0.76, implies that bidders from Israel are advised by internationally focused banks. Similarly, deals involving bidders in Portugal are mostly advised by diversified banks while deals with South-Korean bidders are advised by focused banks.

In addition to *International diversification*, we create a dummy, i.e., $d(\text{Global top 5})$, which equals one for advisors that belong to the global top five advisors, and equals zero otherwise. We

¹¹ The bidder may not be able to observe or may have less information about incomplete deals. In addition, bidders may be wary of the advisors' motives to report and boast about incomplete deals.

¹² For example *Citicorp* and *Travelers Group* merged into *Citigroup* in 1998. If a cross-border acquisition announcement takes place in 1997 with *Citicorp* as a bidder advisor, SDC classifies *Citigroup* as parent advisor. We adjust for this misclassification by considering the deals of *Citicorp* in 1996, but not the deals of *Travelers Group*. However, if a cross-border announcement takes place in 1998 with *Citigroup* as bidder advisor, we consider all deals advised by *Citicorp* and *Travelers Group* in 1997, even though these financial institutions were then not merged yet. The reason for including the deals of both is that we cannot know if the bidder who reports *Citigroup* as advisor hired either *Citicorp* or *Travelers Group*. A more practical reason for our focus on the parent advisor is the occasional use by SDC of somewhat different names for the same subsidiary.

use the same procedure for the classification of a global top five advisor as for our international diversification measure. That is, we calculate the market share of an advisor's ultimate parent based on the value of deals completed by the parent advisor relative to all completed deals reported by SDC per year. We classify an advisor as a global top five advisor when its parent belongs to the top five in terms of market share during the year prior to the cross-border M&A announcement. 27 percent of all deals are advised by global top five advisors. In robustness we also calculate a global top ten or top twenty dummy and our results remain unaffected.

Finally, we define an advisor's *Target-country (bidder-country) focus* as the ratio of the value of advised deals that take place in the target country (bidder country) and the total value of deals the advisor advised (across all countries) during two years prior to the year of the cross-border M&A announcement.¹³ The average (median) target-country focus for all deals equals 0.29 (0.12) with a standard deviation of 0.33. For bidder-country focus, the average (median) equals 0.19 (0.04) with a standard deviation of 0.28.

C. Deal Returns and Other Outcomes

We want to assess the effect of the choice of advisor diversification on deal outcomes, especially their valuation. To do so, we calculate the bidders' stock price reactions in a 3-day window – i.e., minus 1 to plus 1 day – when deals are announced. We use the market model with the bidder country's market index to calculate the bidder Cumulative Abnormal Returns (*Bidder CARs*). The estimation window runs from 110 days until 10 days prior to the deal announcement. To make sure that outliers do not influence our results, we winsorize CARs at the 1- and 99-

¹³ This measure which is the country focus from the advisor's perspective does not account for the total value of deals done by all advisors in a country. Our measures of international diversification and country focus combined span intermediate measures of intra-continental diversification.

percentiles (the 1-percentile threshold equals -18.1 percent and the 99-percentile threshold equals 22.1 percent).

Table 2 shows that the average (median) 3-day bidder CAR of all 415 listed-target deals is -0.61 (-0.44) percent with a standard deviation of 6.12 percent, while for all 1,708 acquisition deals it is 0.85 (0.40) percent with a standard deviation of 6.06 percent.¹⁴ For the 472 acquisition deals with a US bidder, the average (median) 3-day CAR is 0.74 (0.39) percent with a standard deviation of 6.95 percent, which is still significantly different from zero at a less than 5 percent level.

In addition to the bidder CARs, we also calculate *Synergy CARs* and *Bidder relative gains*. Synergy CARs are the market value of equity-weighted bidder's and target's percentage CARs. The bidder relative gains are the bidder's share of the synergy gains, which are calculated following Golubov, Petmezas and Travlos (2012). We first calculate the synergy gains as the sum of the bidder and target dollar-denominated gains, which equal the product of the respective firm's market value of equity with its respective CAR. If the synergy gains are positive, the bidder relative gain equals the bidder dollar-denominated gains divided by the synergy gains. If the synergy gains are negative, the bidder relative gain equals one minus the bidder dollar-denominated gains divided by the synergy gains. Synergy CARs are also consistently positive and statistically significant, and around 1 percent, while bidder relative gains are not consistently signed or significant.

¹⁴ The evidence on returns to buyer firms' shareholders in M&As across different countries is inconclusive. Extensively reviewing the evidence, Campa and Hernando (2004) for example assess it to be evenly distributed between studies that report negative cumulative abnormal returns and those that report zero and slightly positive cumulative abnormal returns (up to 7 percent). They conclude that there is no strong evidence for either positive or negative cumulative abnormal returns to bidders. Moeller and Schlingemann (2005) report mean bidder CAR(-1,1) equal to 0.31 percent for 383 cross-border deals between 1985 and 1995, while Ellis, Moeller, Schlingemann and Stulz (2011) report mean bidder CAR(-2,2) equal to 1.50 percent for 8,090 cross-border deals involving public and private targets between 1990 and 2007.

Table 3 shows that the abnormal returns are largest for advisors with the lowest international diversification, i.e., those in the first tercile. From the first to the third tercile we find a statistically significant decrease in the average (median) CAR of 1.61 (1.01) percent for listed targets and 0.80 (0.31) percent for all targets. Preliminary evidence consistent with the conflicts-of-interest hypothesis that will be confirmed by the multivariate analysis we report later. Similarly calculated, synergy CARs decrease and bidder relative gains increase in international diversification, but neither change is statistically significant. We note that the number of observations for synergy returns and bidder relative gains further drops, because the estimation of these returns requires both bidders and targets to be listed and to have available stock price information.

We follow Healy, Palepu and Ruback (1992) in calculating *Operating performance* as the pretax operating cash flows (i.e., sales minus cost of goods sold and selling and administrative expenses, plus depreciation and goodwill expenses) over beginning of the year assets (i.e., beginning of the year book value of total assets minus book value of equity plus market value of equity). We calculate the median annual operating performance over a period of 5 years prior to and over a period of 5 years after the effective merger year.¹⁵ For the *effective pre-merger year* operating performance of bidder and target are combined through weighing by asset values in the year before the consummation of the merger; for the *effective post-merger year* the operating performance of the merged firm is calculated in the year after the consummation of the merger, where the market values of the assets are adjusted for revaluations of assets at the merger announcement (i.e., the change in target's and bidder's equity value 5 days prior to the

¹⁵ To retain observations for the subset of listed targets, we require the operating performance to be available for at least one year before and one year after the effective year.

announcement date until effective date). As Table 2 reports, post-merger performance equals 14.00 percent and is somewhat larger than pre-merger performance which equals 13.54 percent.

This is also the case after adjusting for industry- and country affiliation, i.e., 4.24 percent versus 3.44 percent, and 3.90 percent versus 2.21 percent, whereby *Industry-adjusted operating performance* is defined as operating performance adjusted for the median performance of all firms worldwide (excl. bidder and target) that operate in the same 2-digit SIC industries as the bidder and target, while *Country-adjusted operating performance* is the operating performance adjusted for the median performance of all firms (excl. bidder and target) that operate in the same countries as the bidder and target. We require a minimum of 5 observations for our calculations of the median target, respectively bidder, industry (country) performance. We combine the median target and bidder industry (country) performance based on the market value of assets the year before the effective date (as in Healy, Palepu and Ruback (1992)).

The final two deal outcomes introduced in Table 2 are $d(Completed)$, a dummy that equals one if the deal was completed, and equals zero if the deal was withdrawn, and *Days until completion*, which is the number of days between the deal announcement and its completion. 87 (95) percent of the listed-target (all) deals are completed, and deals take on average (median) 101 (83) and 68 (48) days to be completed for listed-target and all deals, respectively.

D. Other deal and firm characteristics

Appendix Table A.2 shows summary statistics of the other deal and firm characteristics. We define *Relative transaction size* as the ratio of the transaction value and the asset size of the bidder and find that, on average, the target is around $1/8^{\text{th}}$ of the bidder in asset size, for an

average transaction value that equals 132 million \$.¹⁶ With an average of 279 million \$, deals involving listed targets are larger in absolute terms. Of all (listed target) deals, 19 (24) percent involve a payment including stock. Of all (listed target) transactions, 16 (65) percent are tendered. The dummy variable $d(\text{Complex deal})$ equals one if the reaction of the target to the bidder's bid upon the initial disclosure of the offer price is hostile or unsolicited, or if there are more than one bidder, and equals zero otherwise. Given this definition, only 6 percent of all deals can be classified as complex.¹⁷ This percentage increases to 21 percent for the sub sample of listed-target deals.

As target characteristics, we find that, of all targets, 24 percent are listed. The dummy variable $d(\text{Related acquisition})$ equals one if the target and bidder have at least one equal 3-digit SIC code, and equals zero otherwise. 73 (78) percent of all (listed-target) deals involve a related acquisition. The average (median) target operates in 2 (2) different industries. In 64 (91) percent of all (listed-target) deals the target also engages an advisor.

We define the bidder's *Tobin's q* as the bidder's market value of total assets over its book value of total assets, where the market value of total assets equals the book value of total assets plus market value of equity minus book value of equity. The *Tobin's q* averages 2.45 for all deals and 2.55 for the subset of listed-target deals. The bidder's *free cash flow to assets* ratio is defined as EBITDA scaled by the market value of total assets. The average ratio equals 0.08 for the full sample.

¹⁶ As we employ the logarithm of the transaction value in the first-stage in Model 2 in Table 4, which we will discuss shortly, we report here the exponential of the average of the logarithm of the transaction value, which is of course not equal to the average of the level. We will do so for all the logged variables.

¹⁷ Reported results are unaffected when we include independent dummies for hostile bids and bids with multiple bidders. For reasons of parsimony we report the results where we characterize those few bids in either category with one dummy.

III. Advisor International Diversification and Bidder Returns

A. The Impact of Advisor International Diversification

1. Main regression results

We want to investigate the influence of advisor diversification across countries on bidder returns and test whether more internationally diversified advisors have greater agency problems with the bidder (the conflicts-of-interest hypothesis) or whether they can allocate cross-border deals to the most experienced investment banker, thereby providing superior advice (superior-experience hypothesis).

Table 4 reports the estimated coefficients and heteroscedasticity-consistent standard errors following Huber (1967) and White (1980) (henceforth, Huber-White) from ordinary least squares regressions of the cumulative abnormal returns (CARs) for 3 days around cross-border deal announcements. Advisor international diversification is featured as the main independent variable in all but a few estimated models. We first explore its net effect, but will then by means of interactions with informative advisor-deal variables explore the circumstances under which the two hypotheses apply.

Table 4 reports the same set of regressions for the full sample as for the sub sample with listed targets for two reasons. First, subsequent analyses requires information which is only available for deals with listed targets (e.g., synergy returns). Second, the need for country-specific skills and experience may be particularly acute when dealing with publicly-listed firms. Indeed, while publicly-listed firms are likely to be more transparent than privately-held ones (in a hard-information sense), acquisitions of publicly-listed firms may still demand more skill and effort (Golubov, Petmezas and Travlos (2012)), as well as more soft information, on the part of the advisors than acquisitions of privately-held firms, because of: (1) the greater bargaining

power public firms wield; (2) the complex regulatory and/or shareholder approval process (which may include fighting anti-takeover defenses); and (3) last but not least the problems for bidders to obtain any post-deal court compensation for *undisclosed or hidden* obligations of publicly-listed targets because of their dispersed ownership.

The consequence of a greater need for advisor skills, experience, and effort when acquiring foreign listed targets is an empirical question. On the one hand, if these deals are allocated to the more experienced bankers within a diversified bank (i.e., in the case the superior-experience hypothesis holds), the focus on listed targets could reinforce a positive impact of international diversification on bidder returns. On the other hand, when more diversified advisors are less concerned about their reputation and therefore put less effort in their advice, the requirement of greater skills and effort for publicly listed deals may deteriorate their advice.

[Table 4 around here]

The independent variables in Models 1 (sub sample of listed targets) and 8 (full sample) are international diversification and dummies for country (we include dummies for the top-10 target and top-10 bidder countries), year, and industry. We also add deal, target, and bidder characteristics. As in Moeller and Schlingemann (2005), we include relative transaction size, and stock payment, tender offer, and complex deal dummies, a target-is-listed and related-acquisition dummies, bidder Tobin's q , and bidder free cash flow to assets. With the addition of the bidders' Tobin's q and bidder free cash flow we control for the situation in which the bidder is responsible for the abnormal returns around the deal announcement, which is the case when bidders engage an advisor only for executing the deal at the lowest possible cost, either because

the bidder has its own skills and experience to identify good deals or because of empire-building tendencies (Bao and Edmans (2011)). High q or free-cash-flow bidders may seek advisors that simply execute rather than also advise deals, because such bidders are themselves skilled and experienced or building empires. Finally, we account for large firms being worse acquirers (Moeller, Schlingemann and Stulz (2004)) by adding an indicator variable for bidders with a market value of assets in the highest quartile of our sample.

In line with the conflicts-of-interest hypothesis, we find that the estimated coefficient on international diversification in Model 1 in Table 4 equals -0.0149**, which is statistically significant at the 5 percent level.¹⁸ The estimate is also economically relevant. An increase of one standard deviation in diversification decreases bidder CAR by 95 bps ($= 0.637 * 0.0149$), implying a large semi-elasticity of 159 percent ($= 0.0097 / 0.0061$), or when scaled by the standard deviation an increase of 16 percent ($= 0.0097 / 0.0612$). In dollar terms, with an average bidder's market value of equity of 10.4 billion \$, a 95 bps drop reflects 99 million \$. When focusing on the full sample in Model 8, the negative international-diversification coefficient is about half the size of that of the listed targets sub sample (equal to -0.0066**) and is also statistically significant at a 5 percent level.¹⁹

The estimated coefficients on the other variables in the regressions incorporating all targets are in line with previous studies. Bidders experience higher abnormal returns when they announce an acquisition through a tender offer (e.g., Loughran and Vijh (1997) and Rau and Vermaelen (1998)), or of relative large or non-listed targets (e.g., Servaes and Zenner (1996);

¹⁸ As in Tables ***, **, and * indicate statistical significance at the 1, 5, and 10 percent levels, respectively.

¹⁹ Adding an interaction term between international diversification and an indicator variable for listed targets to Model 8 provides an interaction coefficient equal to -0.009 with a *p*-value of 0.169. Thus, the difference in impact of international diversification on bidder CAR between deals with listed targets and deals with private targets is not statistically significant.

Moeller, Schlingemann and Stulz (2005); Moeller and Schlingemann (2005)). These three coefficients are statistically significant at the 5, 10 and 1 percent level, respectively, and also economically relevant. A one standard deviation increase in relative transaction size increases bidder CARs by 36 bps, a tender offer fetches 155 bps more in CAR, and a listed target decreases bidder CARs by 298 bps. In line with Moeller, Schlingemann and Stulz (2004), large bidders make worse acquisitions. The difference in returns between large bidders and other bidders equals 94 bps. The coefficients on the other variables are not significant.

2. Further Robustness

A number of bidder, deal and advisor characteristics could be further included in our purposely parsimonious specifications. For example, past bidders' advisor choices may be pertinent. In unreported regressions we include a dummy which is equal to one if the same bidder-advisor combination occurred during the preceding five years, and is equal to zero otherwise. Only a quarter of the deals are preceded by past bidder-advisor dealings. We first consider all past deals, then narrow the set to cross-border, and alternatively to target-country deals with same bidder-advisor combination. Irrespective of the past deal definition, including a variable capturing the past relationship between bidder and advisor does not alter the estimated coefficient on international diversification.

The geographical span and location of a deal may also be relevant. So, we include consecutively dummies for deals with bidders and targets in the same region (based on the 6 regions according to the UN geoscheme classifications) or in one of those (where we focus on deals within Europe and within North-America), or for deals with either bidders or targets in one of these regions. Results are unaffected and left unreported.

B. The Impact of Market Share, Country Focus, and Organizational Type

Because many previous empirical studies find a negative impact of a bidder advisor's market share on the bidder's abnormal returns (e.g., Rau (2000) and Bao and Edmans (2011); Golubov, Petmezas and Travlos (2012), on the other hand, find a positive impact), an alternative explanation for our findings is that the negative effect of a bank's international diversification is an artifact of the negative influence of a bank's global market share. Models 2 and 3 for the sample with listed targets and Models 9 and 10 for the full sample consider this issue. In Models 2 and 9, we add a dummy for advisors that belong to the global top five advisors, while we exclude international diversification. In Models 3 and 10, we run both international diversification and the global top five dummy.²⁰

The estimates indicate that a global top tier advisor negatively affects a bidder's abnormal returns, yet this result is not robust, as the addition of international diversification makes the global top tier dummy insignificant. As international diversification remains significant and negative even with the inclusion of a global top tier dummy, this result demonstrates that diversification rather than an advisor's market share negatively affects bidder returns.

So far, we have shown that advisor choice affects deal value. Bidders that select advisors that are geographically concentrated benefit most. This result prompts the question from which type of concentration bidders benefit most. Since the benefit of geographical concentration is the advisor's country-specific skills and experience, we expect a focus on the target or bidder country to have a positive impact on the bidder's returns. This line of reasoning corroborates the

²⁰ In otherwise unreported estimations we find that our results are qualitatively similar when using two different definitions of global advisors, i.e., a global top ten or top twenty dummy based on the value of the deals.

results of Benou, Gleason and Madura (2007), who find that top tier advisors active in the region of foreign high-tech targets positively influence bidders' announcement returns.

In Models 4 and 11 we replace advisors' international diversification by advisors' target-country and bidder-country focus, respectively. By including both types of focus simultaneously, the coefficients represent the impact of target- or bidder-country focus relative to third-country focus, i.e., the percentage of deals the bank advised in countries other than the target or bidder country. The results in Models 4 and 11 indicate that both target- and bidder-country focus positively influence the bidder's announcement returns, but the estimated coefficients are not statistically significant.

Since international diversification is negatively correlated with target-country and bidder-country focus, our negative international diversification coefficient in the earlier models might be an artifact of target-country and bidder-country focus. To separate those two effects, we orthogonalize international diversification on target-country and bidder-country focus and add the orthogonalized value to Models 5 and 12.²¹ International diversification retains its negative impact on deal value after excluding the effects of target- and bidder-country focus.

Finally, we distinguish between whether the advisor is an investment bank or knows another organizational type. Because of the mix of lending and other cross-selling activities, commercial banks may have additional information about targets or bidders, when compared to investment banks (Allen, Jagtiani, Peristiani and Saunders (2004); Schenone (2010)). As a consequence, advice from investment banks might not be as valuable as that of other advisors. Moreover, being less informed about the bidder and/or target could potentially reinforce the negative impact of international diversification on bidder returns. We investigate this issue (1) by adding an

²¹ We regress international diversification on the target-country and bidder-country focus and therefore label the residuals of this regression the orthogonalized value of international diversification.

investment bank dummy to our baseline regressions (Models 6 and 13), and (2) by conditioning international diversification on whether the advisor is an investment bank or has another organizational type (Models 7 and 14). Models 6 and 13 show lower abnormal returns for deals where bidders engage an investment bank. This negative effect is only significant for the subset of listed target deals, i.e., the deals which require greater skills and effort from the side of the advisor. The economic significance is large, as deals with investment banks as advisors generate 2.18 percent lower returns compared to deals with other advisors. Models 7 and 14, however, suggest that international diversification drives this negative investment bank effect. The significance of the investment bank dummy disappears (in Model 7) and international diversification of the investment banks in particular is negatively associated with bidder returns. The difference between the coefficients of investment banks' international diversification and non-investment banks' international diversification is not statistically significant (p-values equal 0.432 and 0.295 for the listed-target and the full sample, respectively).

In sum, our findings indicate that, in our cross section of cross-border M&A deals, the costs of diversified international experience exceed its benefits, resulting in a negative net effect for the value of M&A advice. This negative effect is most prevalent when internationally diversified investment banks are engaged. Thus, conflicts of interest due to diminished reputation concerns for more internationally diversified advisors weigh more heavily than their greater flexibility to allocate the deal to the most experienced advisor. Next, we address endogeneity concerns. We subsequently elaborate on the conflicts-of-interest hypothesis and the superior-experience hypothesis, because these hypotheses hold under different circumstances.

C. Endogenous advisor choice

Anticipated valuation effects by bidders may influence their choice of advisor international diversification. Yet, we may lack widely-accepted theoretical priors precisely how to instrument diversification in this case. In accordance with Golubov, Petmezas and Travlos (2012), we base our instrument on bidders' past advisor choice. Specifically, we estimate the average international diversification of all M&A advisors that bidders engaged in the two years prior to the announcement of the current cross-border deal. We use the imputed mean of the average international diversification of previous advisors for bidders that did not engage an advisor in the two years prior to the current acquisition announcement.²² As additional identification specification, we measure international diversification of past advisors conditional on being an investment bank and international diversification of past advisors conditional on not being an investment bank.

[Table 5 around here]

Table 5 reports four two-stage-least-squares (2SLS) models; Models 1 and 2 for the listed-targets sub sample and Models 3 and 4 for the full sample. The results in these models indicate that previous advisors' international diversification significantly explains the current bidder's choice for advisor international diversification and that this relation is strongest for international diversification of past investment banks hired.²³ Although the estimated coefficient on the

²² Our results remain qualitatively the same when running the two-stage-least-squares regressions with the sub sample of deals for which we have the average international diversification of past advisors available.

²³ The lowest value of the F-statistic against the null that the excluded instruments are irrelevant in the first-stage regressions when using international diversification of previous advisors equals 14.0, which is larger than the 1-percent critical value of 5.4. This value is 6.2 when separating past advisors' international diversification for

instrumented diversification variable is negative in all four models, it shows up significantly negative only for the sub sample with listed targets. In other words, while we cannot rule out an endogenous relation between international diversification and bidder returns in the full sample, we show that the advice from more internationally diversified advisors leads to lower bidder returns when bidders acquire listed targets.

D. Why Does International Diversification Affect Bidder Returns?

In this section we present further evidence on the channels of the negative effect of international diversification on deal value. In particular, we investigate the specific conditions under which the international diversification of the advisor negatively, but also positively impacts bidder returns around cross-border M&A deal announcements as specified in our two hypotheses. According to the conflicts-of-interest hypothesis, the main reason that internationally diversified advisors may not act in the best interest of their clients is their diminished reputation concern. Yet, their diminished reputation concern may be partly offset if, having access to capital, an internationally diversified advisor helps to finance the deal, gets “skin in the game” (because of for instance its firm commitment to underwriting), and consequently has a reputation at stake in financial markets (Chemmanur and Fulghieri (1994)).

An important condition for the superior-experience hypothesis is that internationally diversified advisors should have the capacity to flexibly assign within their organization a team of investment bankers with optimal target- and/or bidder-country specific advisory skills or experience to the respective cross-border M&A deals. Banks may lack the capacity to assign the

investment banks and non-investment banks. With p-values equal to 0.19 for Model 2 and 0.54 for Model 4, the Sargan test-of-overidentifying-restrictions also indicates that the instruments are exogenous (i.e., the error term is uncorrelated with the instruments). In sum, our instrumentation strategy is reasonable.

respective cross-border deal within the organization to a team of investment bankers with adequate target- and/or bidder-country specific experience because the most qualified investment bankers are busy advising other deals. Because the bank cannot simply subcontract the provision of advice (not only for legal but also for reputational reasons),²⁴ the bank may have to assign the deal internally to less experienced investment bankers thereby ending up providing lower-quality advice. Therefore, the advice of well-assigned teams should add more value to the deal, and may generate less negative bidder returns. To understand the underlying mechanisms of the net negative effect of bank diversification on deal value, we assess the extent to which the different circumstances affect the relation between international diversification of advisors and bidder returns. We investigate in Table 6 the effect on bidder return of: (a) the financing provided by the advisor; and (b) the capacity of the advisor in target and bidder country. Because we cannot rule out endogeneity for the full sample of cross-border deals, we restrict our sample to the sub sample of deals involving listed targets.

[Table 6 around here]

1. Financing by the Advisor

Model 1 adds to the baseline Model 1 in Table 4 (that explains the 3-day bidder CAR) the dummy $d(\textit{Pre- and post-announcement financing})$ which equals to one if the advisor assisted the bidder in issuing a syndicated loan, bond and/or equity shares half a year or less prior to the deal announcement up to half a year after the effective date, and equals zero otherwise, and the

²⁴ Subcontracting is often possible in other economic activities. The acquisition of capacity to meet fluctuating demand over a multi-period horizon then needs to balance the trade-off between having insufficient capacity in some periods (which is then met by subcontracting) and excess capacity in others (rendering then capacity idle) (Atamtürk and Hochbaum (2001)).

interaction term between International diversification and $d(\text{Pre- and post-announcement financing})$. 70 out of 415 deals (or 17 percent, see again the Appendix Table A.2 for summary statistics) have pre- and post-announcement financing.

We note that a cleaner proxy for an advisor's skin in the game would be to measure their involvement in financing up to the announcement date instead of half a year after the effective date. However, a reason to incorporate financing post announcement is that advisors likely know *ex ante* that they will be involved in financing the bidder after the deal is publicly announced, generating incentives to provide more valuable advice. It may also be already known to market participants on the deal date, though admittedly we are ignoring here the potential reverse effect of bidder returns on the likelihood of a formal announcement of financing afterwards. A more practical reason for taking the longer window is that we only have 34 observations with pre-announcement financing involvement.

The coefficient on financing equals -0.0689^{***} implying that financing around the deal decreases the 3-day bidder CARs by 689 bps. This finding is most similar to the estimate in Ertugrul and Krishnan (2010) who show for deals of acquirers and targets from the US where advisors are often domestically focused and hence have a low international diversification score that when the acquirer advisor is also the underwriter the acquirer's value decreases by around 500 bps.

Interestingly, the coefficient on the interaction term of diversification and financing that equals 0.0457^{**} indicates that the negative effect of international diversification, i.e., -0.0208^{***} , is more than offset by the presence of deal financing, i.e., internationally diversified advisors that commit to helping finance the deal increase bidder 3-day CARs by 249 bps for each unit of international diversification (though this sum is not significantly different from zero).

Model 2 shows that replacing the interaction term between international diversification and *pre- and post-announcement financing* for an interaction term between international diversification and *pre-announcement financing* provides a positive, but insignificant interaction coefficient, which is not surprising given the low number of observations with advisors' financing involvement before the announcement date.

2. Advisor Capacity

Next we include advisor capacity slack in the regressions. In Model 3 we include the dummy $d(\text{Bidder-country capacity})$, in Model 4 the dummy $d(\text{Target-country capacity})$, and their interactions with international diversification. The dummies equal one if the number of deals in the bidder, respectively target, country handled by the advisor two years prior to the deal announcement exceeds the number of deals in the bidder, respectively target, country advised in the year prior to the deal announcement, and equals zero otherwise. Both variables capture if for the bidder or target nation there is available advisor capacity slack to handle deals. In our dataset of 415 cross-border deals, this is the case for 148 and 139 deals, respectively.

The estimated coefficients on the interaction terms between international diversification and the capacity variables are in all models significantly positive and large enough to neutralize the negative impact of international diversification on bidder returns.²⁵ Having slack advisor capacity in a country itself also (insignificantly) decreases returns.

²⁵ It could be the case that this significant interaction effect is purely driven by the hiring of internationally diversified advisors that advised at least one deal in the target nation already, irrespective of their capacity slack. However, when adding an indicator variable to Models 3 or 4 for having experience in advising a bidder that acquires a firm in the target nation, we find the interaction term between international diversification and target-country capacity to remain significantly positive (results are unreported). In addition, when we feature only the interaction term of international diversification and whether the advisor already advised one or more deals in the target or/and acquirer nation, or target-acquirer nation combination, in the previous two years, the estimated coefficient on this interaction term becomes only significant for the interaction between international diversification and both-nation experience (i.e., experience in either the target or acquirer country or both), and remains insignificant in the other specifications. The significant interaction term for both-nation experience is a separate

In sum, although advisor international diversification decreases bidder returns, the commitment of financing and the presence of capacity slack in the bidder and target country mitigate these negative return effects. The results are in line with the conditions under which the conflicts-of-interest and the superior-experience hypothesis hold and shed light on the channels through which advisors affect deal value.

IV. Advisor International Diversification and the Value of Advice

In this section, we examine the impact of the inferior advice by internationally diversified advisors with conflicting interests and the superior advice by internationally diversified advisors that have enough capacity to allocate the deal to investment bankers with experience in the target country. The outcomes that we focus on are synergy returns, the proportion of the synergies that accrue to the bidders, the change in operating performance of the combined entity post effective year, deal completion rate and the speed of completion.

A. Synergy Returns and Bidder Relative Gains

Bidders' change in wealth depends on the synergies that an acquisition generates and the proportion of the synergies that accrue to these bidders (e.g., Kale, Kini and Ryan (2003)). Advisors might structure better deals by, for instance, identifying targets whose business better match that of bidders, resulting in greater synergy gains. Advisors might also play a more strategic role for bidders by negotiating better deal terms at cost of the target's shareholders, thereby increasing the bidder's share of the total synergy gains.

effect though, as the target-nation capacity interaction with international diversification remains significant when adding both interaction terms to the regression.

In Table 7 we replace bidder returns as the dependent variable with 3-day synergy returns and bidder relative gains. We note that all deals should involve listed targets with available price information for the calculation of these dependent variables.

[Table 7 around here]

We find that international diversification of advisors, who are not involved in financing or do not have target-country specific capacity, negatively affects synergy gains. The negative impact is economically significant. A one standard deviation increase in diversification in Model 2 decreases the synergy gains by 122 bps ($0.637 * -0.0192$). The interaction term between advisors' commitment to financing and international diversification equals 0.0501** and overturns the negative coefficient on international diversification into a positive, but insignificant effect (p-value equals 0.130). The interaction term between advisor capacity slack in the target nation and international diversification in Model 4 is not significant, but neutralizes the negative impact of international diversification.

The estimated coefficients of international diversification in the models that explain bidder relative gains are mostly positive, but not significant. The interaction term between international diversification and advisor's commitment to financing in Model 6 indicates that the positive impact of international diversification becomes marginally significant when advisors have more skin in the game by being involved in financing the deal. We also find that having slack bidder-country specific advisor capacity does not affect bidder relative gains. For target-country capacity the interaction term with international diversification is positive, but with a p-value of 0.102 falls just outside the commonly accepted significance levels.

In sum, bidder losses from engaging internationally diversified advisors with conflicting interest can be attributed to inferior advice in terms of identifying acquisitions with smaller synergies. Engaging internationally diversified advisors with commitment to financing neutralizes this negative synergy effect and helps bidders in negotiating better deal terms.

B. Deal Performance

Next we are interested in the impact of advisor diversification on the change in performance of the bidder-target combination. Superior (inferior) advice on structuring mergers likely results in an improvement (deterioration) of the combined entity's operating performance after the deal is consummated. We follow Healy, Palepu and Ruback (1992) in calculating *Operating performance*, potentially a somewhat more noisy measure and note that we lose 104 observations due to missing values information on the target's or bidder's operating performance pre or post effective year.

[Table 8 around here]

The dependent variable in Models 1 to 4 is the operating performance post-merger, which is industry-adjusted in Models 5 to 8, and country-adjusted in Models 9 to 12. All models contain as independent variables the advisor international diversification and the relevant operating performance of the combined entity pre-merger. Added in level and interacted with international diversification are: in Models 2, 6 and 10 the variable capturing pre- and post- announcement financing (though results are similar for only pre-announcement financing which occurs in only 14 cases); and in Models 3, 4, 7, 8, 11 and 12 bidder, respectively target, country capacity.

International diversification of advisors that are not involved in financing weakens operating performance, and though the estimated coefficient is only statistically significant for the industry-adjusted and country-adjusted measure, it is economically relevant in all cases. A one standard deviation increase in diversification in Model 6 for example decreases country-adjusted operating performance by 101 bps ($0.637 * 0.0158$), implying a semi-elasticity of 46 percent ($0.0101 / 0.0221$).

Advisor financing again mitigates the negative impact of international diversification confirming previous findings. Capacity does not affect the relation between international diversification and operating performance; though in the latter cases the estimated coefficients on the interaction terms themselves are never statistically significant, yet are large enough to offset the impact of diversification.

C. Deal Completion

1. Completion

Table 9 presents the results from logit regressions of the dependent variable $d(\text{Completed})$,²⁶ which equals one if the deal is completed and zero otherwise, on the by-now common set of independent variables.

[Table 9 around here]

International diversification does not have an effect on the probability of deal completion. Commitment to financing or country-specific advisor capacity does not affect this relation.²⁷ So,

²⁶ As in Zhao (2009) for example.

even though internationally diversified advisors with conflicting interest may advise bidders to pursue mergers that generate fewer synergies, our evidence does not show that these advisors have an unlimited drive to “push through” and complete deals.

2. Days until Completion

Finally, we investigate one last dimension of deal performance, which is the deal completion time (i.e., the number of days between the deal announcement date and the deal completion date). Hunter and Jagtiani (2003) suggest that a shorter deal completion time may reflect a greater advisor effort. They empirically show that top-tier advisors are quicker to complete deals, while proxies for deal complexity increase deal completion time. Bao and Edmans (2011) and Chemmanur, Ertugrul and Krishnan (2013) find that investment banks and particular individual investment bankers are associated with faster deal completion time. In addition, those banks or bankers that need less time to complete deals also tend to generate higher abnormal returns, suggesting that investment banks and bankers possess experience along different dimensions.

[Table 10 around here]

To investigate whether an advisor’s international diversification influences deal completion time, Table 10 presents the results of the ordinary least squares regressions of deal completion time on international diversification and control variables.²⁸ With an international diversification

²⁷ Although the interaction term between international diversification and target-nation capacity is tabulated as being statistically significant, it does not imply that the interaction effect is significant for all values. By applying the Delta method, as described by Ai and Norton (2003), we find that the average interaction effect is not significant (the p-value equals 0.339).

²⁸ With a lower bound of zero for the number of days to complete a deal, it would be more appropriate to run Tobit regressions. However, Tobit regressions provide inconsistent estimates for interaction coefficients. Moreover, in our results, the fitted values of the ordinary least squares regressions are always greater than zero except for one out of

coefficient of 11.83** (in Model 1), which is significant at the 5 percent level, we show that international diversification increases the time to complete the deal. A one standard deviation increase in diversification adds 8 days to deal completion ($= 0.65 * 11.83$), a semi-elasticity of 8 percent ($= 7.69 / 101.29$). Target-country capacity again mitigates this effect, suggesting that individual investment bankers with experience in advising deals in the target nation are faster in working through the cross-border deal.

V. Conclusion

To get a better understanding how the international orientation of banks influences the value of their services, we examine 1,708 cross-border acquisitions that took place during a sixteen-year period prior to the financial crisis in which listed non-financial bidders choose an advising bank. In particular, we examine the impact of advisors' international diversification in their M&A advice on bidders' and synergy announcement returns, relative gains, and deal operating performance and completion.

We show that the net effect of greater international diversification of a deal advisor on bidder returns is negative, though mitigated by a financing commitment and the presence of bidder-country-specific or target-country-specific deal capacity. The bidders' wealth losses can be attributed to lower synergies and lower operating performance post effective year, suggesting that more internationally diversified advising banks may struggle to overcome greater conflicts of interest between itself and its client due to smaller reputation concerns.

However, bidders can gain from engaging internationally diversified advisors, under the condition that these advisors have skin in the game by their financing commitment to the bidder,

the 362 observations in models 1, 3 and 4. We have thus decided to report the ordinary least squares regressions. In unreported analyses, we find that our results hold when estimating Tobit regressions.

which gives them incentives to advice deals with greater synergies and to negotiate a greater share of the synergy gains. Alternatively, engaging internationally diversified advisors that have the opportunity to allocate the deal to individual investment bankers with target-country-specific knowledge can benefit bidders by completing deals more quickly.

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TABLE 2
Summary Statistics of All Variables

Table 2 presents the summary statistics of all variables capturing advisor geographical presence and of all dependent variables that are explained in the analyses for the listed targets in the upper panel and for all targets in the lower panel. We assess if mean or median deal returns equal zero. N is the number of observations. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

<i>Listed Targets</i>	Units	Mean	Standard deviation	25%	50% Median	75%	N
Advisor geographical presence							
International diversification	-	1.260	0.637	0.852	1.414	1.718	415
d(Global top 5)	0/1	0.311	0.463	0	0	1	415
Target-country focus	-	0.204	0.282	0.005	0.047	0.336	415
Bidder-country focus	-	0.294	0.317	0.014	0.155	0.549	415
Deal returns							
Bidder CAR [-1;+1]	%	-0.61 **	6.12	-3.26	-0.44	2.53	415
Synergy CAR [-1;+1]	%	1.08 ***	5.60	-1.65	1.01 ***	4.31	287
Bidder relative gains [-1;+1]	%	-25.11 **	210.81	-37.55	1.63	72.31	287
Other deal outcomes							
Operating performance, pre effective year	%	13.54	9.01	9.19	12.71	17.90	183
Operating performance, post effective year	%	14.00	9.70	9.49	12.33	16.67	183
Industry-adjusted operating performance, pre-merger	%	3.44	8.51	-1.06	3.02	6.66	183
Industry-adjusted operating performance, post-merger	%	4.24	9.39	-0.02	2.55	6.12	183
Country-adjusted operating performance, pre-merger	%	2.21	8.87	-2.17	1.43	5.61	170
Country-adjusted operating performance, post-merger	%	3.90	9.59	-0.23	2.45	6.00	170
d(Completed)	0/1	0.87	0.33	1	1	1	415
Days until completion	days	101.29	93.03	52	83	123	362
<hr/> <i>All Targets</i>							
Advisor geographical presence							
International diversification	-	1.208	0.646	0.747	1.332	1.683	1,708
d(Global top 5)	0/1	0.269	0.443	0	0	1	1,708
Target-country focus	-	0.289	0.325	0.009	0.123	0.542	1,704
Bidder-country focus	-	0.195	0.280	0.001	0.039	0.325	1,704
Deal returns							
Bidder CAR [-1;+1]	%	0.85 ***	6.06	-2.06	0.40 ***	3.58	1,708
Other deal outcomes							
d(Completed)	0/1	0.95	0.21	1	1	1	1,708
Days until completion	days	67.81	87.72	15	48	91	1,628

TABLE 3
Bidder CARs and Gains by International Diversification Tercile

Table 3 presents number of observations (Obs.), and the mean and median three-day [-1;+1] bidder cumulative abnormal returns and gains by International Diversification tercile. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	<i>Sample</i>	Bidder CAR			Bidder CAR			Synergy CAR			Bidder Relative Gains		
		<i>Listed Targets</i>			<i>All Targets</i>			<i>Listed Targets</i>			<i>Listed Targets</i>		
		Obs.	Mean	Median	Obs.	Mean	Median	Obs.	Mean	Median	Obs.	Mean	Median
International diversification	first tercile	116	0.60	0.27	572	1.38	0.72	70	1.86	2.08	70	-73.21	9.11
	second tercile	149	-1.14	-0.73	569	0.59	0.16	98	0.61	1.09	98	-1.71	0.88
	third tercile	150	-1.01	-0.74	567	0.58	0.41	119	1.02	0.65	119	-16.08	0.32
	Difference 1 st and 3 rd tercile		1.61 **	1.01 *		0.80 **	0.31 **		0.85	1.43		-57.13	8.79

TABLE 4
Explaining Three-Day Bidder Cumulative Abnormal Returns

Table 4 presents the results from ordinary least squares regressions of three-day [-1;+1] Bidder Cumulative Abnormal Returns on the included independent variables. All variables are defined in the Appendix Table A.1. The estimated coefficients are in the first row, the Hubert-White standard errors are below between parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Sample	Listed Targets						All Targets							
	Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
International diversification		-0.0149 ** [0.006]		-0.0134 ** [0.006]			-0.0123 ** [0.006]		-0.0066 ** [0.003]		-0.0060 ** [0.003]			-0.0062 ** [0.003]	
d(Global top 5)			-0.0132 ** [0.006]	-0.0096 [0.006]						-0.0057 * [0.003]	-0.0040 [0.003]				
Target-country focus					0.0095 [0.015]	-0.0012 [0.016]						0.0074 [0.007]	0.0058 [0.007]		
Bidder-country focus					0.0138 [0.019]	0.0080 [0.019]						0.0079 [0.007]	0.0067 [0.006]		
Orthogonalized international diversification						-0.0194 ** [0.008]							-0.0069 ** [0.003]		
d(Investment bank)							-0.0218 ** [0.009]	-0.0101 [0.017]						-0.0050 [0.003]	0.0012 [0.007]
International diversification * d(Investment bank)								-0.0160 ** [0.007]							-0.0086 ** [0.003]
International diversification * d(Non-investment bank)								-0.0062 [0.011]							-0.0033 [0.004]
Control variables															
Relative transaction size		-0.0268 [0.024]	-0.0315 [0.025]	-0.0267 [0.024]	-0.0321 [0.025]	-0.0271 [0.024]	-0.0275 [0.024]	-0.0289 [0.024]	0.0241 * [0.013]	0.0248 * [0.013]	0.0241 * [0.013]	0.0244 * [0.013]	0.0241 * [0.013]	0.0242 * [0.013]	0.0246 * [0.013]
d(Stock payment)		-0.0129 [0.011]	-0.0122 [0.011]	-0.0133 [0.011]	-0.0120 [0.011]	-0.0129 [0.011]	-0.0132 [0.011]	-0.0133 [0.011]	-0.0058 [0.005]	-0.0061 [0.005]	-0.0062 [0.005]	-0.0056 [0.005]	-0.0057 [0.005]	-0.0060 [0.005]	-0.0063 [0.005]
d(Tender offer)		0.0096 [0.008]	0.0087 [0.008]	0.0089 [0.008]	0.0096 [0.008]	0.0104 [0.008]	0.0086 [0.008]	0.0082 [0.008]	0.0155 ** [0.007]	0.0148 ** [0.007]	0.0152 ** [0.007]	0.0154 ** [0.007]	0.0156 ** [0.007]	0.0153 ** [0.007]	0.0151 ** [0.007]
d(Complex deal)		-0.0052 [0.007]	-0.0068 [0.007]	-0.0052 [0.007]	-0.0064 [0.007]	-0.0052 [0.007]	-0.0056 [0.007]	-0.0057 [0.007]	0.0027 [0.006]	0.0020 [0.006]	0.0027 [0.006]	0.0023 [0.006]	0.0027 [0.006]	0.0028 [0.006]	0.0027 [0.006]
d(Target is listed)									-0.0298 *** [0.007]	-0.0295 *** [0.007]	-0.0295 *** [0.007]	-0.0300 *** [0.007]	-0.0298 *** [0.007]	-0.0293 *** [0.007]	-0.0290 *** [0.007]
d(Related acquisition)		-0.0053 [0.008]	-0.0053 [0.008]	-0.0053 [0.008]	-0.0054 [0.008]	-0.0052 [0.008]	-0.0051 [0.008]	-0.0050 [0.008]	-0.0022 [0.003]	-0.0026 [0.003]	-0.0022 [0.003]	-0.0026 [0.003]	-0.0022 [0.003]	-0.0019 [0.003]	-0.0020 [0.003]
ln(1 + Number of SIC codes of target)		0.0086 [0.006]	0.0083 [0.006]	0.0086 [0.006]	0.0084 [0.006]	0.0084 [0.006]	0.0078 [0.006]	0.0076 [0.006]	0.0004 [0.004]	0.0004 [0.004]	0.0004 [0.004]	0.0004 [0.004]	0.0004 [0.004]	0.0004 [0.004]	0.0004 [0.004]
d(Target hires advisor)		-0.0161 [0.012]	-0.0155 [0.012]	-0.0158 [0.012]	-0.0155 [0.012]	-0.0167 [0.012]	-0.0120 [0.012]	-0.0118 [0.012]	0.0034 [0.003]	0.0038 [0.003]	0.0038 [0.003]	0.0033 [0.003]	0.0034 [0.003]	0.0041 [0.003]	0.0042 [0.003]
Large bidder		-0.0075 [0.008]	-0.0096 [0.008]	-0.0061 [0.008]	-0.0116 [0.008]	-0.0066 [0.008]	-0.0052 [0.008]	-0.0050 [0.008]	-0.0094 *** [0.003]	-0.0103 *** [0.003]	-0.0090 *** [0.003]	-0.0111 *** [0.003]	-0.0094 *** [0.003]	-0.0087 ** [0.003]	-0.0084 ** [0.003]
Bidder Tobin's q		0.0024 [0.002]	0.0026 [0.002]	0.0026 [0.002]	0.0024 [0.002]	0.0024 [0.002]	0.0026 [0.002]	0.0025 [0.002]	0.0013 [0.001]	0.0014 [0.001]	0.0013 [0.001]	0.0013 [0.001]	0.0013 [0.001]	0.0013 [0.001]	0.0013 [0.001]
Bidder free cash flow to assets		0.0384 [0.078]	0.0269 [0.075]	0.0421 [0.077]	0.0234 [0.078]	0.0361 [0.077]	0.0289 [0.077]	0.0261 [0.076]	-0.0012 [0.029]	-0.0029 [0.029]	-0.0008 [0.030]	-0.0031 [0.029]	-0.0014 [0.029]	-0.0014 [0.029]	-0.0016 [0.029]
Constant		0.0103 [0.030]	0.0044 [0.031]	0.0116 [0.030]	-0.0019 [0.031]	-0.0155 [0.030]	0.0186 [0.031]	0.0073 [0.035]	-0.0284 [0.018]	-0.0321 * [0.018]	-0.0284 [0.018]	-0.0347 * [0.018]	-0.0403 ** [0.018]	-0.0269 [0.018]	-0.0294 [0.018]
Top-10 target country (10), top-10 bidder country (10), year (15), and industry (7) dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations		415	415	415	415	415	415	415	1,708	1,708	1,708	1,704	1,704	1,708	1,708
Adjusted R-squared		0.007	-0.005	0.009	-0.015	0.005	0.026	0.026	0.038	0.035	0.038	0.034	0.037	0.039	0.039

TABLE 5
Explaining Three-Day Bidder Cumulative Abnormal Returns in Two-Stage Least Squares Regressions

Table 5 presents the results from two-stage least squares regressions of International diversification (in the first stage) and three-day [-1;+1] Bidder Cumulative Abnormal Returns (in the second stage) on the included independent variables. International diversification of previous advisors is the mean value of International diversification of the advisors employed by the bidder in the two years prior to the considered deal. All variables are defined in the Appendix Table A.1. The estimated coefficients are in the first row, the Hubert-White standard errors are below between parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Sample	Listed Targets				All Targets			
	Model	(1)		(2)		(3)		(4)	
	Stage	First	Second	First	Second	First	Second	First	Second
International diversification			-0.0465 *		-0.0537 *		-0.0002		-0.0224
			[0.027]		[0.030]		[0.011]		[0.015]
Instrumental Variables									
International diversification of previous advisors		0.2943 ***				0.3491 ***			
		[0.081]				[0.042]			
International diversification of previous advisors * d(Investment bank)				0.1498 ***				0.1389 ***	
				[0.045]				[0.021]	
International diversification of previous advisors * d(Non-investment bank)				0.0586				0.072 ***	
				[0.060]				[0.026]	
Control variables, including dummies (see Table 4)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
.....									
Number of Observations		415	415	415	415	1,708	1,708	1,708	1,708
Adjusted R-squared		0.259	0.046	0.256	0.004	0.206	0.065	0.192	0.045

TABLE 6

The Effect of International Diversification through Different Channels on the Three-Day Bidder Cumulative Abnormal Returns

Table 6 presents the results for a sample of listed targets from ordinary least squares regressions of three-day [-1;+1] Bidder Cumulative Abnormal Returns on the included independent variables. All variables are defined in the Appendix Table A.1. The estimated coefficients are in the first row, the Hubert-White standard errors are below between parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	<i>Sample</i>		<i>Listed Targets</i>	
	(1)	(2)	(3)	(4)
International diversification	-0.0208 *** [0.006]	-0.0153 ** [0.006]	-0.0226 *** [0.007]	-0.0226 *** [0.007]
d(Pre- and post-announcement financing)	-0.0689 ** [0.029]			
d(Pre- and post-announcement financing) * International diversification	0.0457 ** [0.019]			
d(Pre-announcement financing)		-0.0163 [0.038]		
d(Pre-announcement financing) * International diversification		0.0104 [0.025]		
d(Bidder-country capacity)			-0.0195 [0.019]	
d(Bidder-country capacity) * International diversification			0.0213 * [0.013]	
d(Target-country capacity)				-0.0332 * [0.019]
d(Target-country capacity) * International diversification				0.0244 * [0.013]
<i>Control variables, including dummies</i> (see Table 4)	Yes	Yes	Yes	Yes
Number of Observations	415	415	415	415
Adjusted R-squared	0.046	0.259	0.256	0.004

TABLE 7
The Effect of International Diversification through Different Channels on Synergy Returns and Bidder Relative Gains

Table 7 presents the results a sample of listed targets from ordinary least squares regressions of Synergy returns and Bidder relative gains on the included independent variables. All variables are defined in the Appendix Table A.1. The estimated coefficients are in the first row, the Hubert-White standard errors are below between parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

<i>Dependent Variable</i>	<i>Synergy Returns</i>				<i>Bidder Relative Gains</i>			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
International diversification	-0.012 *	-0.0192 ***	-0.0125	-0.0180 **	0.4981	0.1599	0.3040	-0.0337
	[0.007]	[0.007]	[0.009]	[0.008]	[0.353]	[0.341]	[0.341]	[0.209]
d(Pre- and post-announcement financing)		-0.0716 **				-4.891 *		
		[0.033]				[2.915]		
d(Pre- and post-announcement financing) * International diversification		0.0501 **				2.9104 *		
		[0.021]				[1.649]		
d(Bidder-country capacity)			0.0103				-0.9467	
			[0.021]				[1.319]	
d(Bidder-country capacity) * International diversification			-0.0017				0.6217	
			[0.014]				[0.808]	
d(Target-country capacity)				-0.0056				-2.2671
				[0.021]				[1.481]
d(Target-country capacity) * International diversification				0.0124				1.4350
				[0.014]				[0.873]
<i>Control variables, including dummies</i> (see Table 4)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	287	287	287	287	287	287	287	287
Adjusted R-squared	-0.024	0.001	-0.028	-0.020	-0.016	0.069	-0.016	0.023

TABLE 8
Explaining the Operating Performance Post-Merger

Table 8 presents the results a sample of listed targets from ordinary least squares regressions of Operating performance post-merger on the included independent variables. All variables are defined in the Appendix Table A.1. The estimated coefficients are in the first row, the Hubert-White standard errors are below between parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

<i>Dependent Variable</i>	<i>Operating performance post-merger</i>											
	<i>Unadjusted</i>				<i>Industry-adjusted</i>				<i>Country-adjusted</i>			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
International diversification	-0.0071 [0.008]	-0.0154 [0.009]	-0.0034 [0.010]	-0.0112 [0.011]	-0.0073 [0.008]	-0.0158 * [0.009]	-0.0037 [0.010]	-0.0104 [0.011]	-0.0115 [0.008]	-0.0205 ** [0.009]	-0.0118 [0.010]	-0.0091 [0.011]
d(Pre- and post-announcement financing)		-0.0454 [0.033]				-0.0499 [0.033]				-0.0435 [0.032]		
d(Pre- and post-announcement financing) * International diversification		0.0393 * [0.021]				0.0415 * [0.021]				0.0397 * [0.021]		
d(Bidder-country capacity)			0.0226 [0.028]				0.0203 [0.028]				-0.0060 [0.028]	
d(Bidder-country capacity) * International diversification			-0.0135 [0.018]				-0.0126 [0.019]				0.0017 [0.019]	
d(Target-country capacity)				-0.0035 [0.027]				0.0025 [0.027]				0.0198 [0.027]
d(Target-country capacity) * International diversification				0.0086 [0.017]				0.0057 [0.018]				-0.0087 [0.018]
Operating performance (of combined entity) pre-merger	0.7719 *** [0.056]	0.7576 *** [0.056]	0.7724 *** [0.056]	0.7676 *** [0.056]	0.7617 *** [0.059]	0.7438 *** [0.060]	0.7620 *** [0.060]	0.7580 *** [0.060]	0.7869 *** [0.057]	0.7693 *** [0.057]	0.7861 *** [0.057]	0.7845 *** [0.058]
Constant	0.0454 *** [0.015]	0.0568 *** [0.016]	0.0389 ** [0.017]	0.0481 *** [0.018]	0.0262 ** [0.013]	0.0370 ** [0.014]	0.0204 [0.015]	0.0265 * [0.016]	0.0375 *** [0.013]	0.0477 *** [0.014]	0.0394 ** [0.015]	0.0316 ** [0.016]
Number of Observations	183	183	183	183	183	183	183	183	170	170	170	170
Adjusted R-squared	0.513	0.518	0.509	0.510	0.473	0.480	0.468	0.470	0.528	0.536	0.523	0.525

TABLE 9
Explaining Deal Completion

Table 9 presents the results a sample of listed targets from ordinary least squares regressions of Deal completion on the included independent variables. All variables are defined in the Appendix Table A.1. The estimated coefficients are in the first row, the Hubert-White standard errors are below between parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
International diversification	0.2300 [0.394]	0.3915 [0.404]	0.1403 [0.466]	0.5839 [0.446]
d(Pre- and post-announcement financing)		2.4999 [1.938]		
d(Pre- and post-announcement financing) * International diversification		-2.0268 [1.240]		
d(Bidder-country capacity)			-0.6515 [1.042]	
d(Bidder-country capacity) * International diversification			0.1921 [0.716]	
d(Target-country capacity)				4.2322 ** [1.894]
d(Target-country capacity) * International diversification				-2.8963 ** [1.215]
<i>Control variables, including dummies</i> (see Table 4)	Yes	Yes	Yes	Yes
Number of Observations	415	415	415	415
McFadden's Adjusted R-squared	0.178	0.175	0.167	0.183

TABLE 10
Explaining the Days until Deal Completion

Table 10 presents the results a sample of listed targets from ordinary least squares regressions of the Days until deal completion on the included independent variables. All variables are defined in the Appendix Table A.1. The estimated coefficients are in the first row, the Hubert-White standard errors are below between parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
International diversification	11.832 ** [5.988]	11.627 * [6.962]	13.115 ** [6.610]	21.291 ** [8.410]
d(Pre- and post-announcement financing)		13.361 [23.017]		
d(Pre- and post-announcement financing) * International diversification		-1.807 [15.527]		
d(Bidder-country capacity)			13.283 [16.767]	
d(Bidder-country capacity) * International diversification			-5.991 [12.252]	
d(Target-country capacity)				32.997 ** [14.053]
d(Target-country capacity) * International diversification				-26.880 ** [11.640]
<i>Control variables, including dummies</i> (see Table 4)	Yes	Yes	Yes	Yes
Number of Observations	362	362	362	362
Adjusted R-squared	0.297	0.294	0.294	0.300

TABLE A.1

Table A.1 lists the variable name, definition, unit, and source (Src.). Units include: 0/1: dummy variable that equals one or zero, \$-mln: millions of US dollars, \$-PPP: purchase power adjusted US dollars, %: percentage, km: kilometers, and x-y: range going from x to y. In addition to own calculations the employed data sources include: BS: BankScope, D: doingbusiness.com, DLLS: Djankov, La Porta, Lopez-de-Silanes and Shleifer (2003), F: Factbooks, GCR: Global Competitiveness Report 2005-2006, K/H: Kogut and Singh (1988) and Hofstede (1991), LLSV: La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997), M: mapcrow.info, DS: Datastream, SDC: Securities Data Corporation database, WDI: World Development Indicators, and WS: Worldscope.

Variable Name	Definition	Unit	Src.
<i>Advisor Geographical Presence</i>			
International diversification	The entropy measure of diversification defined in Jaquemin and Berry (1979) and Palepu (1985) which equals the sum across all countries where the advisor operates of advisor country shares times the natural logarithm of one over advisor country shares (based on the value of deals during the last year).	-	SDC
d(Global top 5)	=1 if the advisor belongs to the global top five in terms of market share during the year prior to the cross-border M&A announcement, and =0 otherwise.	0/1	SDC
Target-country focus	The ratio of the value of advised deals that take place in the target country and the total value of advised deals during two years prior to the year of the cross-border M&A announcement.	-	SDC
Bidder- country focus	The ratio of the value of advised deals that take place in the bidder country and the total value of advised deals during two years prior to the year of the cross-border M&A announcement.	-	SDC
Orthogonalized international diversification	The residuals of a regression of International diversification on the target-country and bidder-country focus	-	SDC
<i>Deal Returns</i>			
Bidder CAR[-1,+1]	The percentage 3-day Cumulative Abnormal Returns (CARs) of cross-border deal announcements winsorized at the 1- and 99-percentiles. The estimation window of the market model runs from 110 days until 10 days prior to the deal announcement.	%	DS
Synergy CAR[-1,+1]	The market value of equity-weighted bidder's and target's percentage 3-day Cumulative Abnormal Returns (CARs) of cross-border deal announcements winsorized at the 1- and 99-percentiles. The estimation window of the market model runs from 110 days until 10 days prior to the deal announcement.	%	DS

Bidder relative gains [-1,+1]	The bidder's share of the 3-day synergy gains of cross-border deal announcements winsorized at the 1 st and 99 th percentiles. Following Golubov, Petmezas and Travlos (2012), we estimate the synergy gains as the sum of the bidder and target dollar-denominated gains, which equal the product of the respective firm's market value of equity with its respective CAR. If the synergy gains are positive, the bidder relative gain equals the bidder dollar-denominated gains divided by the synergy gains. If the synergy gains are negative, the bidder relative gain equals one minus the bidder dollar-denominated gains divided by the synergy gains.	%	DS
<i>Other Deal Outcomes</i>			
Operating performance	Pretax operating cash flows (i.e., sales minus cost of goods sold and selling and administrative expenses, plus depreciation and goodwill expenses) over assets (i.e., beginning of the year book value of total assets minus book value of equity plus market value of equity), as in Healy, Palepu and Ruback (1992). For the effective pre-merger years, operating performance of bidder and target are combined through weighing by asset values in the years before the consummation of the merger. For the effective post-merger year the operating performance of the merged firm is calculated in the years after the consummation of the merger, where the market values of the assets are adjusted for revaluations of assets at the merger announcement (i.e., the change in target's and bidder's equity value 5 days prior to the announcement date until effective date). We report the median annual operating performance over a period of 5 years prior to and over a period of 5 years after the effective merger year.	%	WS
Industry-adjusted operating performance	Operating performance adjusted for the performance of all firms worldwide (excl. bidder and target) that operate in the same 2-digit SIC industries as the bidder and target. We require a minimum of 5 observations for our calculation of the median target and the median bidder industry performance and combine the median target and bidder industry performance based on the market value of assets the year before the effective date (as in Healy, Palepu and Ruback (1992)).	%	WS
Country-adjusted operating performance	Operating performance adjusted for the performance of all firms (excl. bidder and target) that operate in the same countries as the bidder and target. We require a minimum of 5 observations for our calculation of the median target and the median bidder country performance and combine the median target and bidder country performance based on the market value of assets the year before the effective date (as in Healy, Palepu and Ruback (1992)).	%	WS
d(Completed)	=1 if the deal was completed, and =0 if the deal was withdrawn.	0/1	SDC
Days until completion	The number of days between the deal announcement and its completion (i.e., the consummation of the merger).	days	SDC
<i>Deal Characteristics</i>			
ln(Value transaction)	Natural logarithm of the value of the transaction.	\$-mln	SDC
Relative transaction size	Ratio of the transaction value to the market value of the bidder. We measure the market value of the bidder at the beginning of the year of the acquisition announcement and equals the book value of the bidder's assets minus its book value of equity plus its market value of equity.	-	SDC

d(Stock payment)	= 1 if at least a proportion of the payment consists of stock, = 0 otherwise.	0/1	SDC
d(Tender offer)	=1 if SDC classifies the deal as a tender offer, = 0 otherwise.	0/1	SDC
d(Complex deal)	= 1 if the reaction of the target to the bidder's bid upon the initial disclosure of the offer price is hostile or unsolicited, or if there are more than one bidder, = 0 otherwise.	0/1	SDC

Target Characteristics

d(Target is listed)	= 1 if target is listed, = 0 otherwise.	0/1	SDC
d(Related acquisition)	= 1 if the target and bidder have at least one equal 3-digit SIC code, = 0 otherwise.	0/1	SDC
ln(1+ Number of SIC codes of target)	Natural logarithm of one plus the number of SIC codes of the target.	-	SDC
d(Target hires advisor)	= 1 if target hires an advisor, = 0 otherwise.	0/1	SDC

Bidder Characteristics

Market value of total assets	The market value of total assets equals book value of total assets plus market value of equity minus book value of equity.	-	WS
Market value of equity	Market value of equity	-	WS
Large bidder	= 1 if the bidder's market value of total assets appears in the highest quartile of our full sample, = 0 otherwise.	0/1	WS
Bidder Tobin's q	Ratio of the market value of total assets to the book value of total assets. The market value of total assets equals book value of total assets plus market value of equity minus book value of equity.	-	WS
Bidder free cash flow to assets	EBITDA scaled by the market value of total assets. The market value of total assets equals book value of total assets plus market value of equity minus book value of equity.	-	WS
ln(1+ Previous acquisition experience)	Natural logarithm of one plus the number of deals in the ten years prior to the cross-border deal in which the bidder and/or bidder parent obtained at least 50% of the assets to own at least 95%.	-	SDC
d(Acquisition experience in target country)	= 1 if the bidder and/or bidder parent has acquisition experience in target country in the ten years period prior to the cross-border acquisition, = 0 otherwise.	0/1	SDC
% Cross-border acquisition experience	Percentage of cross-border deals in the ten years prior to the cross-border deal in which the bidder and/or bidder parent obtained at least 50% of the assets to own at least 95% (equals zero if there were no cross-border deals or no deals).	%	SDC

Advisor Characteristics

d(Investment bank)	= 1 if the advisor is an investment bank, = 0 otherwise. In case of missing information in BankScope, a web search was used to find a description of the bank's activities.	0/1	BS
d(Non-investment bank)	= 1 if the advisor is not an investment bank, = 0 otherwise. In case of missing information in BankScope, a web search was used to find a description of the bank's activities.	0/1	BS
d(Pre-announcement financing)	= 1 if the advisor assisted the bidder in issuing a syndicated loan, bond and/or equity shares half a year or less prior to the deal announcement, = 0 otherwise.	0/1	SDC

d(Pre- and post- announcement financing)	= 1 if the advisor assisted the bidder in issuing a syndicated loan, bond and/or equity shares between half a year before the deal announcement and half a year after the effective date, = 0 otherwise.	0/1	SDC
d(Bidder-country capacity)	= 1 if the number of deals in the bidder (target) nation handled by the advisor <i>two years</i> prior to the deal announcement exceeds the number of deals in the bidder (target) nation advised in <i>the year</i> prior to the deal announcement, = 0 otherwise.	0/1	SDC

TABLE A.2
Summary Statistics of All Other Variables

Table A.2 presents the summary statistics of all variables not included in Table 2 and that are used in the analyses. N is the number of observations.

<i>Listed Targets</i>	Units	Mean	Standard deviation	25%	50% Median	75%	N
Deal characteristics							
ln(Transaction value)	\$-mln	5.63	1.46	4.49	5.55	6.67	415
Relative transaction size	-	0.14	0.17	0.03	0.07	0.18	415
d(Stock payment)	0/1	0.24	0.43	0	0	0	415
d(Tender offer)	0/1	0.65	0.48	0	1	1	415
d(Complex deal)	0/1	0.21	0.41	0	0	0	415
Target characteristics							
d(Related acquisition)	0/1	0.78	0.42	1	1	1	415
ln(1 + Number of SIC codes of target)	-	1.24	0.48	0.69	1.10	1.61	415
d(Target hires advisor)	0/1	0.91	0.29	1	1	1	415
Bidder characteristics							
Market value of total assets	\$-mln	17,932	49,122	1,083	4,578	16,446	415
Market value of equity	\$-mln	10,449	26,684	742	2,815	9,050	415
Large bidder	0/1	0.33	0.47	0	0	1	415
Bidder Tobin's q	-	2.55	2.25	1.33	1.75	2.67	415
Bidder free cash flow to assets	-	0.07	0.05	0.05	0.07	0.11	415
ln(1+ Previous acquisition experience)	-	1.85	1.19	1.10	1.95	2.83	415
d(Acquisition experience in target country)	0/1	0.46	0.50	0	0	1	415
% Cross-border acquisition experience	%	0.46	0.37	0.00	0.46	0.78	415
Advisor-deal characteristics							
d(Pre-announcement financing)	0/1	0.08	0.27	0	0	0	415
d(Pre- and post-announcement financing)	0/1	0.17	0.37	0	0	0	415
d(Bidder-country capacity)	0/1	0.36	0.48	0	0	1	415
d(Target-country capacity)	0/1	0.33	0.47	0	0	1	415
All Targets							
Deal characteristics							
ln(Transaction value)	\$-mln	4.89	1.48	3.76	4.83	5.91	1,708
Relative transaction size	-	0.12	0.15	0.02	0.06	0.15	1,708
d(Stock payment)	0/1	0.19	0.39	0	0	0	1,708
d(Tender offer)	0/1	0.16	0.37	0	0	0	1,708
d(Complex deal)	0/1	0.06	0.23	0	0	0	1,708
Target characteristics							
d(Target is listed)	0/1	0.24	0.43	0	0	0	1,708
d(Related acquisition)	0/1	0.73	0.44	0	1	1	1,708
ln(1 + Number of SIC codes of target)	-	1.09	0.42	0.69	1.10	1.39	1,708
d(Target hires advisor)	0/1	0.64	0.48	0	1	1	1,708
Bidder characteristics							
Market value of total assets	\$-mln	14,291	36,897	614	2,584	10,640	1,708
Market value of equity	\$-mln	9,086	24,024	402	1,574	6,562	1,708
Large bidder	0/1	0.25	0.43	0	0	1	1,708
Bidder Tobin's q	-	2.45	2.46	1.30	1.73	2.56	1,708
Bidder free cash flow to assets	-	0.08	0.07	0.05	0.08	0.11	1,708
ln(1+ Previous acquisition experience)	-	1.76	1.12	1.10	1.79	2.64	1,708
d(Acquisition experience in target country)	0/1	0.40	0.49	0	0	1	1,708
% Cross-border acquisition experience	%	44.28	37.51	0.00	43.48	77.78	1,708
Advisor-deal characteristics							
d(Pre-announcement financing)	0/1	0.07	0.26	0	0	0	1,708
d(Pre- and post-announcement financing)	0/1	0.17	0.37	0	0	0	1,708
d(Bidder-country capacity)	0/1	0.34	0.48	0	0	1	1,708
d(Target-country capacity)	0/1	0.31	0.46	0	0	1	1,708

TABLE A.3
International Diversification by Target and Bidder Country

	Number of Observations		Mean of International Diversification	
	Target origin	Bidder origin	Target origin	Bidder origin
Argentina	7	1	1.35	0.69
Australia	65	39	1.25	1.45
Austria	6	9	1.39	1.17
Bahamas	0	3		1.53
Belgium	18	16	1.39	1.13
Bermuda	4	2	0.44	1.87
Botswana	1	0	0.00	
Brazil	21	1	1.44	1.46
Canada	108	110	0.99	1.05
Cayman Islands	1	0	0.60	
Chile	5	1	1.58	1.56
China	17	4	1.51	1.78
Colombia	1	0	0.30	
Czech Republic	3	0	1.13	
Denmark	20	12	1.20	1.28
Ecuador	1	0	1.93	
Finland	17	36	1.33	1.24
France	98	98	1.16	1.34
Germany	127	78	1.22	1.39
Ghana	1	0	2.01	
Greece	1	2	1.82	1.85
Guernsey	1	1	0.43	1.27
Hong Kong	11	24	1.37	1.21
Hungary	1	0	1.03	
Iceland	1	0	2.41	
India	10	11	1.56	1.55
Indonesia	5	0	1.35	
Ireland	20	28	0.85	1.07
Israel	17	9	0.76	1.44
Italy	33	30	1.34	1.32
Japan	6	39	1.10	0.99
Kazakhstan	1	0	0.00	
Luxembourg	4	3	1.55	1.84
Malaysia	4	4	1.04	1.25
Mauritania	1	0	1.02	
Mexico	5	9	1.37	1.37
Neth Antilles	0	1		0.00
Netherlands	65	66	1.32	1.39
New Zealand	18	11	1.45	1.21
Norway	30	17	1.18	1.27
Pakistan	1	0	1.04	
Papua N Guinea	2	1	0.29	1.38
Peru	2	0	1.12	
Philippines	3	1	0.94	2.10
Poland	6	0	1.31	
Portugal	1	5	0.92	1.92
Puerto Rico	3	0	1.13	
Russian Fed	5	5	1.44	1.27
Singapore	11	8	1.45	1.72
South Africa	10	15	1.51	1.56
South Korea	13	1	1.42	0.33
Spain	32	7	1.41	1.30
Sweden	47	48	1.32	1.25
Switzerland	35	49	1.38	1.35
Taiwan	4	4	1.57	1.65
Thailand	1	1	1.56	2.28
Tunisia	1	0	0.79	
United Kingdom	256	426	1.20	1.17
United States	517	472	1.17	1.11
Venezuela	1	0	0.18	
Bangladesh	1	0	1.77	
Sri Lanka	1	0	1.95	
Total / Mean	1,708	1,708	1.20	1.36